Summary Algorithm for the management of shoulder dystocia
(Permission for use PROMPT Foundation 2017)

CALL FOR HELP
Midwife coordinator, additional midwifery help, experienced obstetrician, neonatal team

Discourage pushing
Lie flat and move buttocks to edge of bed

McROBERTS’ MANOEUVRE
(thighs to abdomen)
(Consider ‘All fours - McRoberts’ if lone birth attendant)
(with routine axial traction)

Suprapubic pressure
(and routine axial traction)

ONLY consider episiotomy if unable to gain access of whole hand

Try either manoeuvre first depending on clinical circumstances and operator experience

DEUVER POSTERIOR ARM

INTERNAL ROTATIONAL MANOEUVRES

Inform consultant obstetrician and anaesthetist

If above manoeuvres fail to release impacted shoulders, consider
ALL-FOURS POSITION (if appropriate)
OR
Repeat all the above again

Consider cleidotomy, Zavanelli manoeuvre or symphysiotomy

Management of Shoulder Dystocia Clinical Guideline V2.1
1. **Aim/Purpose of this Guideline**

1.1. To give guidance to obstetricians and midwives on the identification and management of a shoulder dystocia and subsequent care of a baby following a shoulder dystocia

1.2. This version supersedes any previous versions of this document.

1.3. **Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation**

   The Trust has a duty under the DPA18 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed and documented. We can’t rely on Opt out, it must be Opt in.

   DPA18 is applicable to all staff; this includes those working as contractors and providers of services.

   For more information about your obligations under the DPA18 please see the ‘information use framework policy’, or contact the Information Governance Team rch-tr.infogov@nhs.net

2. **The Guidance**

2.1 **Definition**

Shoulder dystocia is an acute obstetric emergency which requires prompt, efficient action. It is defined as a vaginal cephalic delivery that requires additional obstetric manoeuvres to release the shoulders after gentle downward traction has failed. Shoulder dystocia occurs when either the anterior or, less commonly, the posterior fetal shoulder impacts on the maternal symphysis or sacral promontory.

2.1. **Incidence:**

The overall incidence affects 0.1-3% of all births

**Risk Factors:**

Most cases of shoulder dystocia are unexpected. Occurrence cannot be predicted with any certainty, but can be suspected or anticipated when there is evidence of a large baby, especially in association with maternal obesity or diabetes or of a contracted pelvis. Although most labours preceding shoulder dystocia are normal, there may be warning signs see 2.3 and 2.4

2.2. **Pre-labour**

- Previous shoulder dystocia
- Fetal Macrosomia >4.5kgs
- Maternal Diabetes mellitus
- Maternal Obesity BMI >30kg/m2 BMI to be calculated from the dating scan appointment (New 2019)
- Induction of labour
- Gestational age
2.3. Intrapartum
- Prolonged first stage of labour
- Secondary arrest
- Prolonged second stage of labour
- Oxytocin augmentation
- Operative vaginal delivery

2.4. Plan for Delivery
2.4.1. Women with pre labour risk factors should be offered delivery in a consultant led unit
2.4.2. Women with intrapartum risk factors should be considered for intrapartum transfer to a consultant unit
2.4.3. Induction of labour is not an appropriate intervention to lower the risk of shoulder dystocia.
2.4.4. Planned caesarean section should be considered for the small group of women with diabetes and suspected fetal macrosomia (estimated fetal weight greater than 4.5 kg).

2.5. Recognition of a shoulder dystocia
2.5.1. Diagnosis is made once an additional obstetric manoeuvre has been used to release the shoulders. However, timely management of a shoulder dystocia requires prompt recognition, the delivering attendant should routinely observe for:
- Slow and difficult delivery of the fetal face and chin
- Fetal head delivered, it remains tightly applied to the vulva
- Failure of restitution of the fetal head
- Chin retraction “turtle neck”
- Anterior shoulder fails to deliver with maternal effort and/or ‘routine’ axial traction is applied

2.5.2. If the woman is giving birth in a pool, she should be evacuated from the pool when the midwife recognises signs of delay with the birth of the shoulders. It may not be possible to confirm a shoulder dystocia at this stage, but the woman should be safely moved out of the pool. No manoeuvres should be attempted in the pool. New 2018

2.6. Call for help - Ask the woman to stop pushing, clearly state the problem
- Experienced midwives
- Experienced obstetrician
- Health care assistants
- Neonatologists
- Anesthetist & theatre team on standby
2.7. In Consultant unit
- Using emergency buzzer
- Call for: Midwife co-ordinator, additional midwifery help, experienced obstetrician and neonatal team.
- Consider calling for an anaesthetist

2.8. Community or birth centre
- 2nd midwife, maternity support worker, birth partner
- 999 for emergency ambulance

2.9. Management of woman and baby after delivery
2.9.1. Complications
When managed appropriately there is still significant perinatal mortality and morbidity associated with shoulder dystocia (cerebral hypoxia, cerebral palsy, fracture clavicle/humerus, brachial plexus injury), plus increased maternal morbidity including postpartum hemorrhage (11%) and fourth degree perineal tears (3.8%).

2.9.1.1. Perinatal Complications
- Stillbirth
- Hypoxia
- Brachial plexus injury
- Fractures (humeral and clavicle)

2.9.1.2. Maternal Complications
- Postpartum hemorrhage
- Third and fourth degree tears
- Uterine rupture
- Psychological distress

2.9.1.3. Brachial Plexus Injuries in Newborn
4-16% with 10% injuries lasting > 1 year incidence of permanent injury 1/2300 live births in the UK. Fetal brachial plexus injuries (Erb’s palsy, Klumpke’s paralysis) complicate 4-16% of deliveries complicated by shoulder dystocia with less than 10% resulting in permanent disability. This is the most common cause for litigation in relation to shoulder dystocia and the incidence of brachial plexus injury in the UK is 1 in 2300 live births. Both excess downwards traction and maternal expulsive efforts contribute to causing these injuries.

2.9.1.4. Erb’s Palsy
Is the most common injury. The upper arm is flaccid and lower arm is extended and rotated towards the body with the hand held in a ‘waiters tip’ posture. Up to 90% of Erb’s palsies recover by 12 months

2.9.1.5. Klumpke’s Palsy
Is less common. The hand is limp, with no movement of the fingers. The recovery rate is lower, with around 40% of injuries resolving within 12 months

2.9.1.6. Total brachial Plexus injury
Occurs in approximately 20% of brachial plexus injuries. There is a total sensory and motor deficit of the entire arm, making it completely paralysed with no sensation.

### 2.9.1.7. Humeral and clavicular fractures

Can occur after a shoulder dystocia and may be related to poor care and/or inaccurate execution of the release maneuvers. These fractures usually heal quickly and have a good prognosis.

### 2.10. Management

If brachial plexus injuries and associated injuries are diagnosed or suspected by a paediatrician undertake:

- Referral to aftercare physiotherapists
- Arrange paediatric follow up.

### 2.11. Umbilical paired cord samples

If birth has taken place in the acute unit, umbilical paired cord samples should be taken and tested for acid base measurement and the results documented in both the maternal and neonatal notes and filed in the secure store envelope.

### 2.12. Documentation

#### 2.12.1. Should be factual, consistent and accurate and be written as soon as possible after an event has occurred.

#### 2.12.2. A shoulder dystocia proforma must be completed to ensure the correct information has been documented. (Appendix 3)

#### 2.12.3. If available, a staff member should be asked to note times, manoeuvres and staff present, as the event is occurring.

- Head & body delivery times
- Staff attendance and the times they arrived
- Which manoeuvres were performed and their order
- The degree and direction of traction applied
- The anterior shoulder at the time of the dystocia
- Condition of the baby at birth
  - Apgar’s
  - Cord PHs
  - Signs of neonatal injury

### 2.13. Incident reporting

An incident form to be completed for any shoulder dystocia resulting in a poor neonatal outcome. E.g. Apgar’s < 6 at 5 minutes, arterial PH of less than 7.05, suspected fractures/brachial plexus injury, unexpected admission to the neonatal unit, stillbirth or poor maternal outcome e.g. PPH > 1000mls, 3rd/4th degree tear, Zavanelli manoeuvre or symphysiotomy. These incidents will be reviewed as per the maternity risk management strategy for Royal Cornwall Hospitals NHS Trust.

### 2.14. Training in shoulder dystocia

All midwives, Maternity support workers, Anesthetist and Obstetricians employed by Royal Cornwall Hospitals NHS Trust attend annual Training in Practical
### 3. Monitoring compliance and effectiveness

| Element to be monitored | • The audit will take into account record keeping by obstetricians and midwives  
|                         | • The results will be inputted onto an excel spreadsheet  
|                         | • The audit will be registered with the Trust's audit department |
| Lead                    | Audit Midwife |
| Tool                    | • Was a shoulder dystocia proforma completed  
|                         | • Was it filed chronologically in the health records  
|                         | • Were there any antenatal risk factors  
|                         | • Were there any intrapartum risk factors  
|                         | • Were the procedures used to assist delivery clearly documented on the proforma  
|                         | • Was the fetal position during the dystocia clearly documented on the proforma  
|                         | • Was the baby assessment after birth clearly documented on the proforma  
|                         | • Were there any actual or suspected associated neonatal injuries  
|                         | • If Yes: Was there appropriate follow up of the baby |
| Frequency               | • All health records of women who have delivered following a shoulder dystocia will be audited continuously over the lifetime of the guideline  
|                         | • All health records of newborns where there was actual or suspected brachial plexus injury, or any other injury associated with the complications of a shoulder dystocia delivery, will be audited |
| Reporting arrangements  | • A formal report of the results will be received annually at the Patient Safety Meeting and clinical audit forum, as per the audit plan  
|                         | • During the process of the audit if compliance is below 75% or other deficiencies identified, this will be highlighted at the next Maternity Forum and clinical audit forum and an action plan agreed. |
| Acting on recommendations and Lead(s) | • Any deficiencies identified on the annual report will be discussed at the Maternity Forum or clinical audit forum and an action plan developed  
|                         | • Action leads will be identified and a time frame for the action to be completed by  
|                         | • The action plan will be monitored by the Audit midwife and clinical audit forum until all actions complete |
| Change in practice and lessons to be shared | • Required changes to practice will be identified and actioned within a time frame agreed on the action plan  
|                         | • A lead member of the forum will be identified to take each change forward where appropriate.  
|                         |   - The results of the audits will be distributed to all staff through the patient safety newsletter/audit forum as per the action plan |
4. **Equality and Diversity**

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the *Equality, Inclusion & Human Rights Policy* or the [Equality and Diversity website](#).

4.2. **Equality Impact Assessment**

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Management of Shoulder Dystocia Clinical Guideline V2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date Issued/Approved:</strong></td>
<td>October 2019</td>
</tr>
<tr>
<td><strong>Date Valid From:</strong></td>
<td>October 2019</td>
</tr>
<tr>
<td><strong>Date Valid To:</strong></td>
<td>June 2021</td>
</tr>
<tr>
<td><strong>Directorate / Department responsible (author/owner):</strong></td>
<td>Charlotte Boswell, Community Midwife Link Trainer</td>
</tr>
<tr>
<td><strong>Contact details:</strong></td>
<td>01872 25 2270</td>
</tr>
<tr>
<td><strong>Brief summary of contents</strong></td>
<td>To give guidance to obstetricians and midwives on the identification and management of a shoulder dystocia and subsequent care of a baby following a shoulder dystocia</td>
</tr>
<tr>
<td><strong>Suggested Keywords:</strong></td>
<td>Shoulder dystocia</td>
</tr>
<tr>
<td><strong>Target Audience</strong></td>
<td>RCHT  CFT  KCCG</td>
</tr>
<tr>
<td><strong>Executive Director responsible for Policy:</strong></td>
<td>Medical Director</td>
</tr>
<tr>
<td><strong>Date revised:</strong></td>
<td>October 2019</td>
</tr>
<tr>
<td><strong>This document replaces (exact title of previous version):</strong></td>
<td>Management of Shoulder Dystocia Clinical Guideline V2.0</td>
</tr>
<tr>
<td><strong>Approval route (names of committees)/consultation:</strong></td>
<td>Clinical Guidelines Group  Maternity Governance Obstetrics and Gynaecology Directorate Policy Review group Divisional Board for approval</td>
</tr>
<tr>
<td><strong>Care Group General Manager confirming approval processes</strong></td>
<td>Debora Sheilds, Care Group Manager</td>
</tr>
<tr>
<td><strong>Name and Post Title of additional signatories</strong></td>
<td>Not entered</td>
</tr>
<tr>
<td><strong>Name and Signature of Care Group/Directorate Governance Lead confirming approval by specialty and care group management meetings</strong></td>
<td>{Original Copy Signed}  Name: Caroline Amukusana</td>
</tr>
<tr>
<td><strong>Signature of Executive Director giving approval</strong></td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td><strong>Publication Location (refer to Policy)</strong></td>
<td>Internet &amp; Intranet  Intranet Only</td>
</tr>
</tbody>
</table>
Document Library Folder/Sub Folder | e.g. Clinical / Midwifery and Obstetrics
--- | ---
Links to key external standards | CNST .8 Evidence 90% of each maternity staff group have attended in house multi professional maternity emergency session within the last training year

### Related Documents:

### Training Need Identified?
Annual PROMPT training day
Maternity staff attendees should include: obstetricians (including Consultants, staff grades and trainees); obstetric anaesthetic staff (Consultants and relevant trainees); midwives (including midwifery managers and matrons, community midwives; birth centre midwives (working in co-located and stand alone birth centres) and bank midwives); maternity theatre and critical care staff; health care assistants (to be included in the maternity skill drills as a minimum) and other relevant clinical members of the maternity team.

Trusts should be evidencing the position as at end April 2018.

### Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Versio n No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2003</td>
<td>V1.0</td>
<td>Initial document</td>
<td>Sally Budgen Delivery suite coordinator</td>
</tr>
<tr>
<td>Date</td>
<td>Version</td>
<td>Description</td>
<td>Author</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>April 2009</td>
<td>V1.1</td>
<td>Updated inline with RCOG guidance</td>
<td>Jan Clarkson Maternity risk manager</td>
</tr>
<tr>
<td>May 2011</td>
<td>V1.2</td>
<td>Reviewed and compliance monitoring added</td>
<td>Jan Clarkson Maternity risk manager</td>
</tr>
<tr>
<td>September 2012</td>
<td>V1.3</td>
<td>Changes to compliance monitoring tool only</td>
<td>Jan Clarkson Maternity risk manager</td>
</tr>
<tr>
<td>7th June 2018</td>
<td>V2.0</td>
<td>Changes to recognition of shoulder dystocia in the pool, training in shoulder dystocia, algorithm changed in line with PROMPT See all New 2018 in body of text</td>
<td>Charlotte Boswell, Community Midwife and PROMPT trainer</td>
</tr>
<tr>
<td>October 2019</td>
<td>V2.1</td>
<td>Addition to 2.3 regarding the calculation of the BMI at the 12 week scan appointment.</td>
<td>Sarah-Jane Pedler, Practice Development Midwife</td>
</tr>
</tbody>
</table>

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.
This document is only valid on the day of printing

Controlled Document
This document has been created following the Royal Cornwall Hospitals NHS Trust Policy for the Development and Management of Knowledge, Procedural and Web Documents (The Policy on Policies). It should not be altered in any way without the express permission of the author or their Line Manager.
# Appendix 2. Initial Equality Impact Assessment Form

<table>
<thead>
<tr>
<th>Directorate and service area:</th>
<th>New or existing document:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs and Gynae</td>
<td>Existing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of individual completing assessment:</th>
<th>Telephone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cahrlotte Bosswell</td>
<td>01872 25 2270</td>
</tr>
</tbody>
</table>

1. **Policy Aim**
   
   **Who is the strategy / policy / proposal / service function aimed at?**
   
   To give guidance to obstetricians and midwives on the identification and management of a shoulder dystocia and subsequent care of a baby following a shoulder dystocia

2. **Policy Objectives**
   
   To ensure correct emergency procedures are followed in the case of a shoulder dystocia

3. **Policy – intended Outcomes**
   
   Best possible outcome for mother and baby in a shoulder dystocia situation

4. **How will you measure the outcome?**
   
   Compliance monitoring tool

5. **Who is intended to benefit from the policy?**
   
   Pregnant women and their babies

6a. **Who did you consult with**

<table>
<thead>
<tr>
<th>Workforce</th>
<th>Patients</th>
<th>Local groups</th>
<th>External organisations</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   b). **Please identify the groups who have been consulted about this procedure.**
   
   Maternity Guidelines Group
   Maternity Governance
   Obstetrics and Gynaecology Directorate
   Policy Review group
   Divisional Board

   **What was the outcome of the consultation?**
   
   Guideline agreed

7. **The Impact**

   Please complete the following table. **If you are unsure/don’t know if there is a negative impact you need to repeat the consultation step.**

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex (male, female, trans-gender / gender reassignment)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race / Ethnic communities /groups</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability - Learning disability, physical impairment, sensory impairment, mental health conditions and some long term health conditions.</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion / other beliefs</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage and Civil partnership</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:
- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation- this excludes any policies which have been identified as not requiring consultation. or
- Major this relates to service redesign or development

8. Please indicate if a full equality analysis is recommended. 
   - Yes
   - No
   - X

9. If you are not recommending a Full Impact assessment please explain why.
   - Not indicated

| Date of completion and submission | October 2019 |
| Members approving screening assessment | |
| Policy Review Group (PRG) | |

This EIA will not be uploaded to the Trust website without the approval of the Policy Review Group.

A summary of the results will be published on the Trust’s web site.
### Appendix 3. Shoulder Dystocia Documentation

| Date ……………………… | Mother’s Name ......................................................................................................................................................... |
| Time ……………………… | Date of birth ............................................................................................................................................................... |
| Person completing form …………….. | Hospital Number .............................................................................................................................................................. |
| Signature ………………………………….. | Consultant .......................................................................................................................................................................... |

#### Called for help at:

**Emergency call via switchboard at:**

#### Staff present at delivery of head:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Additional staff attending for delivery of the shoulders:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Time arrived</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Procedures used to assist delivery

<table>
<thead>
<tr>
<th>By whom</th>
<th>Time</th>
<th>Order</th>
<th>Details</th>
<th>Reason if not performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>McRoberts’ position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suprapubic pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Episiotomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery of posterior arm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal rotational manoeuvre</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Description of rotation

- Routine axial (as in normal vaginal delivery)

#### Description of traction

- Routine axial (as in normal vaginal delivery)

#### Other manoeuvres used

<table>
<thead>
<tr>
<th>Mode of delivery of the head</th>
<th>Spontaneous</th>
<th>Ventous</th>
<th>Forceps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of delivery of head</td>
<td>Time of delivery of baby</td>
<td>Head-to-body delivery interval</td>
<td></td>
</tr>
<tr>
<td>Fetal position during dystocia</td>
<td>Head facing maternal left, left fetal shoulder anterior</td>
<td>Head facing maternal right, right fetal shoulder anterior</td>
<td></td>
</tr>
<tr>
<td>Birth weight</td>
<td>kg</td>
<td>1 min :</td>
<td>5 mins :</td>
</tr>
<tr>
<td>Apgar score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art pH :</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vein pH :</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art BE :</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vein BE :</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Paediatric team called?

- Yes

Time paediatric team arrived: …………… name ……………………………………………………………………………………

If not called or didn’t arrive, give reason……………………………………………………………………………………………

#### Baby assessment after birth (can be completed by a M/W) If yes to any of the questions refer to neonatal team

- Any sign of arm weakness | yes/no (circle)
- Any sign of possible bony fracture | yes/no (circle)
- Baby admitted to NNU | yes/no (circle)

Assessment completed by…………………………………………………………………………………………………………..

Sign………………………………………………………………………………………………………………………date…………………………..